

Project X Scope

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Project X Working Group Meeting
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Initial Scope



- 8 GeV linac capable of delivering 360 kW
- Modifications to the Main Injector allowing acceleration of beam, followed by single turn extraction at 2 MW beam power over the range 60-120 GeV
- Availability of 8 GeV beam with an average beam power ranging between 100 – 200 kW, depending upon the beam parameters of the MI based program.
- Plan is to document the an initial performance specification and configuration in an Initial Configuration Document (ICD)
 - Sufficient detail to form the basis of a preliminary (CD-0) cost estimate

Project X/DUSEL Interface



- We are preparing to pursue Project X and DUSEL as parallel projects.
 - DUSEL project will encompass the beamline, target facility, and the remote detector.
 - ⇒ Propose scope of Project X ends at the MI extraction kicker.
 - ⇒ This means that Project X will not include an upgrade to the NuMI target facility

Interface to 8 GeV Program



- We have not yet determined this. There are two issues:
 - We have not demonstrated that slow spill from the Recycler at 8 GeV is possible; and;
 - We do not really know who the user will be and what beam structure they require (so the first difficulty may be moot).
- Directorate has stated clearly that they want 8 GeV capability in the scope. So I see a couple options:
 1. Include the Recycler in the initial scope with a capability of delivering beam at an average power of roughly 200 kW, but without specifying the spill structure (fast or slow).
 2. Choose an experiment (mu2e phase two) and develop a scenario for the delivery of beam based on their requirements.
 3. Limit the Project X specification to providing 360 kW of beam power from the linac at 8 GeV, but do not address how and where beam is delivered at 8 GeV.

Interface to 8 GeV Program



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- Then either modify the scope of Project X at a time when the experimental requirements at 8 GeV are better known, or would incorporate those requirements into the scope of the new experiment.

Short term strategy



- General strategy for the next:
 - Complete ICD: 10/1/08
 - Start cost estimating: 10/1/108
 - Initial understanding of collaborator assignments: 10/1/08
 - Update R&D plan: 11/15/08
 - Collaboration meeting: 11/21-22/08
 - Initial draft of cost estimate: 2/1/09
 - Director's CD-0 Review: spring 2009
 - DOE CD-0 Review: spring 2009
 - Draft PED funding request: spring 2009
 - CD-0: spring/summer 2009
 - PED funding request: summer 2009
 - Start CD-1 documentation: spring/summer 2009